independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is NR^7;

G is OR^7.

In another sub-embodiment, a structure of the formula (IX) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is NR^7;

G is NR^7R^8.

In another sub-embodiment, a structure of the formula (IX) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

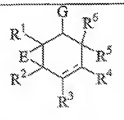
R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is NR^7;

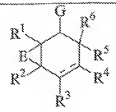
G is SR^7.

In a particular embodiment of the present invention, the compounds of the formula (IX) are the following species:



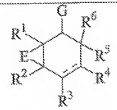
(IX)

G	E	R^1	R^2	R^3	R^4	R^5	R^6
OH	O	Me	H	H	H	Me	Me
OH	O	*i*-Pr	H	H	H	Me	Me



(IX)

G	E	R^1	R^2	R^3	R^4	R^5	R^6
OH	O	Ph	H	H	H	Me	Me
OH	O	Me	Me	H	H	Me	Me
OH	O	*i*-Pr	Me	H	H	Me	Me
OH	O	Ph	Me	H	H	Me	Me
OH	O	Me	H	Me	H	Me	Me
OH	O	*i*-Pr	H	Me	H	Me	Me
OH	O	Ph	H	Me	H	Me	Me
OH	O	Me	H	H	Me	Me	Me
OH	O	*i*-Pr	H	H	Me	Me	Me
OH	O	Ph	H	H	Me	Me	Me
OH	O	Me	H	CH_2Ph	H	Me	Me
OH	O	*i*-Pr	H	CH_2Ph	H	Me	Me
OH	O	Ph	H	CH_2Ph	H	Me	Me
OH	CH_2	Me	H	H	H	Me	Me
OH	CH_2	*i*-Pr	H	H	H	Me	Me
OH	CH_2	Ph	H	H	H	Me	Me
OH	CH_2	Me	Me	H	H	Me	Me
OH	CH_2	*i*-Pr	Me	H	H	Me	Me
OH	CH_2	Ph	Me	H	H	Me	Me



(IX)

G	E	R^1	R^2	R^3	R^4	R^5	R^6
OH	CH_2	Me	H	Me	H	Me	Me
OH	CH_2	*i*-Pr	H	Me	H	Me	Me
OH	CH_2	Ph	H	Me	H	Me	Me
OH	CH_2	Me	H	H	Me	Me	Me
OH	CH_2	*i*-Pr	H	H	Me	Me	Me
OH	CH_2	Ph	H	H	Me	Me	Me
OH	CH_2	Me	H	CH_2Ph	H	Me	Me
OH	CH_2	*i*-Pr	H	CH_2Ph	H	Me	Me
OH	CH_2	Ph	H	CH_2Ph	H	Me	Me

In a sub-embodiment, a structure of the formula (X) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

A is O;

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^{13} (X = O, NR^{14} or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, R^{20}, R^{21}, R^{22} and R^{23} independently are selected from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic,

sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^{13} (X = O, NR^{12} or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two $CR^{15}R^{16}$ groups, connected by a tether, independently selected from $CR^{15}R^{16}$, $CR^{15}R^{16}CR^{17}R^{18}$, CR^{15}=CR^{16}, $CR^{15}R^{16}O$ or $CR^{15}R^{16}NR^{17}$;

the dotted line indicates the presence of either a single or double bond, wherein in the presence of a single bond, the valences are completed with hydrogens.

In another sub-embodiment, a structure of the formula (X) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

A is NR^7;

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^{13} (X = O, NR^{14} or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, R^{20}, R^{21}, R^{22} and R^{23} independently are selected from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^{11} (X = O, NR^{12} or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two $CR^{15}R^{16}$ groups, connected by a tether, independently selected from $CR^{15}R^{16}$, $CR^{15}R^{16}CR^{17}R^{18}$, CR^{15}=CR^{16}, $CR^{15}R^{16}O$ or $CR^{15}R^{16}NR^{17}$;

the dotted line indicates the presence of either a single or double bond, wherein in the presence of a single bond, the valences are completed with hydrogens.

In another sub-embodiment, a structure of the formula (X) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

A is S;

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^{13} (X = O, NR^{14} or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, R^{20}, R^{21}, R^{22} and R^{23} independently are selected from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^{11} (X = O, NR^{12} or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two $CR^{13}R^{14}$ groups, connected by a tether, independently selected from $CR^{15}R^{16}$, $CR^{15}R^{16}CR^{17}R^{18}$, $CR^{15}{=}CR^{16}$, $CR^{15}R^{16}O$ or $CR^{15}R^{16}NR^{17}$;

the dotted line indicates the presence of either a single or double bond, wherein in the presence of a single bond, the valences are completed with hydrogens.

In a sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester,

alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

The dotted line indicates the presence of either a single or double bond;

E is selected from the groups that include CR^7R^8, O, S or NR^7;

A is selected from the groups that include O, NR^7 or S.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$; and

The dotted line indicates the presence of either a single or double bond;

E is O;

A is O.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

The dotted line indicates the presence of either a single or double bond;

E is O;

A is NR^7.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl,

heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

The dotted line indicates the presence of either a single or double bond;

E is O;

A is S.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7 and R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$.

The dotted line indicates the presence of either a single or double bond;

E is CR^7R^8;

A is O.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

The dotted line indicates the presence of either a single or double bond;

E is CR^7R^8;

A is NR^7.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is CR^7R^8;

A is S.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$;

The dotted line indicates the presence of either a single or double bond;

E is S;

A is O.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is S;

A is NR^7.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide,

a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is S;

A is S.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected

independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is NR^7;

A is O.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is NR^7;

A is NR^8.

In another sub-embodiment, a structure of the formula (XI) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

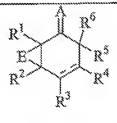
R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

E is NR^7;

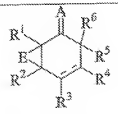
A is S.

In a particular embodiment of the present invention, the compounds of the formula (XI) are the following species:



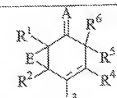
(XI)

A	E	R^1	R^2	R^3	R^4	R^5	R^6
O	O	Me	H	H	H	Me	Me
O	O	*i*-Pr	H	H	H	Me	Me



(XI)

A	E	R^1	R^2	R^3	R^4	R^5	R^6
O	O	Ph	H	H	H	Me	Me
O	O	Me	Me	H	H	Me	Me
O	O	*i*-Pr	Me	H	H	Me	Me
O	O	Ph	Me	H	H	Me	Me
O	O	Me	H	Me	H	Me	Me
O	O	*i*-Pr	H	Me	H	Me	Me
O	O	Ph	H	Me	H	Me	Me
O	O	Me	H	H	Me	Me	Me
O	O	*i*-Pr	H	H	Me	Me	Me
O	O	Ph	H	H	Me	Me	Me
O	O	Me	H	CH_2Ph	H	Me	Me
O	O	*i*-Pr	H	CH_2Ph	H	Me	Me
O	O	Ph	H	CH_2Ph	H	Me	Me
O	CH_2	Me	H	H	H	Me	Me
O	CH_2	*i*-Pr	H	H	H	Me	Me
O	CH_2	Ph	H	H	H	Me	Me
O	CH_2	Me	Me	H	H	Me	Me
O	CH_2	*i*-Pr	Me	H	H	Me	Me
O	CH_2	Ph	Me	H	H	Me	Me



(XI)

A	E	R^1	R^2	R^3	R^4	R^5	R^6
O	CH_2	Me	H	Me	H	Me	Me
O	CH_2	*i*-Pr	H	Me	H	Me	Me
O	CH_2	Ph	H	Me	H	Me	Me
O	CH_2	Me	H	H	Me	Me	Me
O	CH_2	*i*-Pr	H	H	Me	Me	Me
O	CH_2	Ph	H	H	Me	Me	Me
O	CH_2	Me	H	CH_2Ph	H	Me	Me
O	CH_2	*i*-Pr	H	CH_2Ph	H	Me	Me
O	CH_2	Ph	H	CH_2Ph	H	Me	Me

In a sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester,

alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

E and D are selected from the groups that include CR^7R^8, O, S or NR^7;

A is selected from the groups that include O, NR^7 or S.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyi, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cymo, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$; and

D = O, E = O and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

D = O, E = NR^8 and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected

independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

D = O, E = CR^7R^8, and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7 and R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$.

D = O, E = S and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl,

heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

D = O, E = O and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = O, E = NR^8 and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$;

D = O, E = CR^7R^8 and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected

independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$;

D = O, E = S and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = CR^7R^8, E = O and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = CR^7R^8, E = NR^8 and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = CR^7R^8, E = CR^7R^8 and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = CR^7R^8, E = S, and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = CR^7R^8$, $E = O$ and $A = NR^7$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = CR^7R^8$, $E = NR^8$ and $A = NR^7$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = CR^7R^8, E = CR^7R^8 and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = CR^7R^8, E = S and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyi, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = S, E = O and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = S$, $E = NR^8$ and $A = O$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 ($X = O$, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 ($X = O$, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = S$, $E = CR^7R^8$ and $A = O$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 ($X = O$, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = S, E = S. and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = S, E = O and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = S, E = NR^8 and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = S$, $E = CR^7R^8$ and $A = NR^7$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 ($X = O$, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 ($X = O$, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = S$, $E = S$ and $A = NR^7$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 ($X = O$, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = NR^7, E = O and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = NR^7, E = NR^8 and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = NR^7, E = CR^7R^8 and A = O.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = NR^7$, $E = S$, and $A = O$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

$D = NR^7$, $E = O$ and $A = NR^7$.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = NR^7, E = NR^8 and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

D = NR^7, E = CR^7R^8 and A = NR^7.

In another sub-embodiment, a structure of the formula (XII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug are defined as follows:

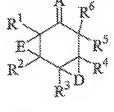
R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

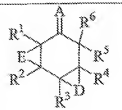
D = NR^7, E = S and A = NR^7.

In a particular embodiment of the present invention, the compounds of the formula (XII) are the following species:



(XII)

A	D	E	R^1	R^2	R^3	R^4	R^5	R^6
O	O	O	Me	H	H	H	Me	Me
O	O	O	*i*-Pr	H	H	H	Me	Me
O	O	O	Ph	H	H	H	Me	Me



(XII)

A	D	E	R^1	R^2	R^3	R^4	R^5	R^6
O	O	O	Me	Me	H	H	Me	Me
O	O	O	*i*-Pr	Me	H	H	Me	Me
O	O	O	Ph	Me	H	H	Me	Me
O	O	O	Me	H	Me	H	Me	Me
O	O	O	*i*-Pr	H	Me	H	Me	Me
O	O	O	Ph	H	Me	H	Me	Me
O	O	O	Me	H	H	Me	Me	Me
O	O	O	*i*-Pr	H	H	Me	Me	Me
O	O	O	Ph	H	H	Me	Me	Me
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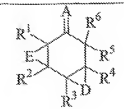
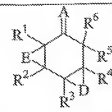
O	O	CH_2	Me	H	Me	H	Me	Me



(XII)

A	D	E	R^1	R^2	R^3	R^4	R^5	R^6
O	O	CH_2	*i*-Pr	H	Me	H	Me	Me
O	O	CH_2	Ph	H	Me	H	Me	Me
O	O	CH_2	Me	H	H	Me	Me	Me
O	O	CH_2	*i*-Pr	H	H	Me	Me	Me
O	O	CH_2	Ph	H	H	Me	Me	Me
O	O	CH_2	Me	H	CH_2Ph	H	Me	Me
O	O	CH_2	*i*-Pr	H	CH_2Ph	H	Me	Me
O	CH_2	CH_2	Ph	H	CH_2Ph	H	Me	Me
O	CH_2	CH_2	Me	H	H	H	Me	Me
O	CH_2	CH_2	*i*-Pr	H	H	H	Me	Me
O	CH_2	CH_2	Ph	H	H	H	Me	Me
O	CH_2	CH_2	Me	Me	H	H	Me	Me
O	CH_2	CH_2	*i*-Pr	Me	H	H	Me	Me
O	CH_2	CH_2	Ph	Me	H	H	Me	Me
O	CH_2	CH_2	Me	H	Me	H	Me	Me
O	CH_2	CH_2	*i*-Pr	H	Me	H	Me	Me
O	CH_2	CH_2	Ph	H	Me	H	Me	Me
O	CH_2	CH_2	Me	H	H	Me	Me	Me
O	CH_2	CH_2	*i*-Pr	H	H	Me	Me	Me



(XII)

A	D	E	R^1	R^2	R^3	R^4	R^5	R^6
O	CH_2	CH_2	Ph	H	H	Me	Me	Me
O	CH_2	CH_2	Me	H	CH_2Ph	H	Me	Me
O	CH_2	CH_2	*i*-Pr	H	CH_2Ph	H	Me	Me
O	CH_2	CH_2	Ph	H	CH_2Ph	H	Me	Me

In a sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

The dotted line indicates the presence of either a single or double bond;

D is selected from the groups that include CR^7R^8, O, S or NR^7;

A is selected from the groups that include O, NR^7 or S.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$; and

The dotted line indicates the presence of either a single or double bond;

D is O;

A is O.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

The dotted line indicates the presence of either a single or double bond;

D is O;

A is NR^7.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

The dotted line indicates the presence of either a single or double bond;

D is O;

A is S.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7 and R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$.

The dotted line indicates the presence of either a single or double bond;

D is CR^7R^8;

A O.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

The dotted line indicates the presence of either a single or double bond;

D is CR^7R^8;

A is NR^7.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

D is CR^7R^8;

A is S.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$;

The dotted line indicates the presence of either a single or double bond;

D is S;

A is O.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide,

a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

D is S;

A is NR^7.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected

independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

D is S;

A is S.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

D is NR^7;

A is O.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

D is NR^7;

A is NR^8.

In another sub-embodiment, a structure of the formula (XIII) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

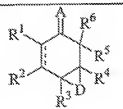
R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

The dotted line indicates the presence of either a single or double bond;

D is NR^7;

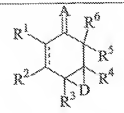
A is S.

In a particular embodiment of the present invention, the compounds of the formula (XIII) are the following species:



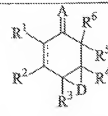
(XIII)

A	D	R^1	R^2	R^3	R^4	R^5	R^6
O	O	Me	H	H	H	Me	Me
O	O	*i*-Pr	H	H	H	Me	Me
O	O	Ph	H	H	H	Me	Me
O	O	Me	Me	H	H	Me	Me
O	O	*i*-Pr	Me	H	H	Me	Me
O	O	Ph	Me	H	H	Me	Me
O	O	Me	H	Me	H	Me	Me
O	O	*i*-Pr	H	Me	H	Me	Me
O	O	Ph	H	Me	H	Me	Me
O	O	Me	H	H	Me	Me	Me



(XIII)

A	D	R^1	R^2	R^3	R^4	R^5	R^6
O	O	*i*-Pr	H	H	Me	Me	Me
O	O	Ph	H	H	Me	Me	Me
O	O	Me	H	CH_2Ph	H	Me	Me
O	O	*i*-Pr	H	CH_2Ph	H	Me	Me
O	O	Ph	H	CH_2Ph	H	Me	Me
O	CH_2	Me	H	H	H	Me	Me
O	CH_2	*i*-Pr	H	H	H	Me	Me
O	CH_2	Ph	H	H	H	Me	Me
O	CH_2	Me	Me	H	H	Me	Me
O	CH_2	*i*-Pr	Me	H	H	Me	Me
O	CH_2	Ph	Me	H	H	Me	Me
O	CH_2	Me	H	Me	H	Me	Me
O	CH_2	*i*-Pr	H	Me	H	Me	Me
O	CH_2	Ph	H	Me	H	Me	Me
O	CH_2	Me	H	H	Me	Me	Me
O	CH_2	*i*-Pr	H	H	Me	Me	Me
O	CH_2	Ph	H	H	Me	Me	Me
O	CH_2	Me	H	CH_2Ph	H	Me	Me
O	CH_2	*i*-Pr	H	CH_2Ph	H	Me	Me



(XIII)

A	D	R^1	R^2	R^3	R^4	R^5	R^6
O	CH_2	Ph	H	CH_2Ph	H	Me	Me

In a sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

the dotted line indicates the presence of either a single or double bond;

B is selected from the groups that include CR^7R^8, O, S or NR^7;

G is selected from the groups that include OR^7, NR^7R^8 or SR^7.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$; and

the dotted line indicates the presence of either a single or double bond;

B is O;

G is OR^7.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester,

alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$.

the dotted line indicates the presence of either a single or double bond;

B is O;

G is NR^7R^8.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

the dotted line indicates the presence of either a single or double bond;

B is O;

G is SR^7.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^2, R^3, R^4, R^5, R^6, R^7 and R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S).

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$.

the dotted line indicates the presence of either a single or double bond;

B is CR^7R^8;

G OR^7.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro,

cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$; and

the dotted line indicates the presence of either a single or double bond;

B is CR^7R^8;

G is NR^7R^8.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R^1 and R^2, R^2 and R^3, R^3 and R^4, R^4 and R^5 and R^5 and R^6 can also each be comprised of one or two CR^7R^8 groups, connected by a tether, selected independently from groups that include CR^7R^8, $CR^7R^8CR^7R^8$, $CR^7{=}CR^8$, CR^7R^8O and $CR^7R^8NR^7$;

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R^2, R^3, R^4, R^5, R^6, R^7, R^8 are selected independently from the groups that include hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, alkaryl, arylalkyl, heterocyclic, sulfonyl, sulfanyl, sulfinyl, sulfamonyl, carboxylic acid, amide, nitro, cyano, azide, phosphonyl, phosphinyl, phosphoryl, phosphine, carbamate, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);

R_1 and R_2, R_2 and R_3, R_3 and R_4, R_4 and R_5 and R_5 and R_6 can also each be comprised of one or two CR_7R_8 groups, connected by a tether, selected independently from groups that include CR_7R_8, $CR_7R_8CR_7R_8$, $CR_7{=}CR_8$, CR_7R_8O and $CR_7R_8NR_7$;

the dotted line indicates the presence of either a single or double bond;

B is S;

G is OR^7.

In another sub-embodiment, a structure of the formula (XIV) is given wherein the compound or its pharmaceutically acceptable salts or prodrug is defined as follows:

R^1 is selected independently from the groups that include hydrogen, alkyl, cycloalkyl, aryl, alkaryl, arylalkyl, heterocyclic, ester, alkcarbonyl, carbonyl, halide, a residue of a natural or synthetic amino acid, or carbohydrate or XR^7 (X = O, NR^8 or S);